

R E M A R K S

This is in response to the Office Action that was mailed on May 4, 2004. New claims 6-8 are based upon claim 5. The positive recitation of absence of adhesive in new claim 9 is based upon the law set forth in *Ex parte Parks*, 30 USPQ2d 1234 (B.P.A.I. 1994). In this regard, Applicants point out that the arguments submitted herein do not exclude the use of a fusing (adhesion) material in the method of the present invention. New claims 10 and 11 are based upon the Examples. No new matter is introduced by this Amendment. Entry of this Amendment in order to place the application into condition for allowance, or into better condition for appeal, is respectfully solicited. With this Amendment, claims 1-11 are in the application.

Claims 1-4 were rejected under 35 U.S.C. §103(a) as being unpatentable over JP 1257031 (Nitto). Claim 5 was rejected under 35 U.S.C. §103(a) as being unpatentable over Nitto in view of GB 1,250,503 (Clabburn). The rejections are respectfully traversed.

Nitto describes thermal shrinkage rates of "100 to 400%" for large-diameter and medium-diameter tubular bodies. See page 4, lines 24-25 of the translation of the Nitto reference. With such large shrinkage rates, a large

shrinking force is generated when the tubular bodies are shrunk, and thus the bodies can be firmly integrated together even in the absence of a fluorine-containing resin powder having thermal fusing properties. To impart such a large shrinkage rate to a polymer material, special treatment is necessary, as explained in Applicants' previous comments in connection with the Clabburn reference.

The Nitto reference is silent with respect to thermal shrinkage rates of small-diameter tubular bodies. This means that the thermal shrinkage rate of the small-diameter bodies is no so large as 100 to 400%, and the small-diameter tubular bodies are not specially treated to impart such a large thermal shrinkage rate. Therefore, it may be supposed that the small-diameter tubular bodies of the Nitto reference have a coefficient of thermal shrinkage of an untreated material, which is very small as in the case of the present invention.

With tubular materials having a small thermal shrinkage rate, a fluorine-containing resin powder having thermal fusing properties is applied on the outer peripheral surface of the tubular bodies to bond them together. See the second paragraph on page 5 of the translation of the Nitto reference. This means that the Nitto fails to teach or suggest that ***parts composed of modified PTFE having a coefficient of thermal shrinkage in the range***

between 0.2 and 10% can be bonded by the method of the present invention.

The preceding argument is supported by the description in lines 22-25 on page 7 of the translation of the Nitto reference:

In the method of the present invention, a medium-diameter tubular body and a large-diameter tubular body having thermal shrinkage property are used. Due to the thermal shrinking force and the thermal fusing property of the fluorine-containing resin powder, the tubular bodies are bonded to each other.

To further distinguish over the combination of Nitto and Clabburn, claim 6 recites separately molding modified PTFE powders having different particle sizes, claim 8 recites molding an as-polymerized modified PTFE and a granulated product of that modified PTFE, claim 9 calls for joining the premolded parts in the absence of an adhesive, and claims 10-11 require differently shaped premolded parts. It goes without saying that these optional features of the invention differentiate the present invention still further over the Nitto and Clabburn references.

Claims 1-4 were rejected under 35 U.S.C. §103(a) as being unpatentable over US 4,800,100 (Washizu). Claim 5 was rejected under 35 U.S.C. §103(a) as being unpatentable over Washizu in view of Clabburn. The rejections are respectfully traversed.

The Examiner alleges that Washizu discloses that it is known to melt/fusion bond two fluoropolymer parts or substrates together. What Washizu actually teaches is that when polymer materials having a fusion (or adhesion) property are used as in the case of his Examples 1 and 2, no adhesive material is necessary to bond the parts/substrates together. When a PTFE tube is bonded to a polyamide resin inner tube, a polyamide adhesive is used, since the two materials have no adhesion properties with respect to one another. Therefore, the teachings of the Washizu reference are far removed from the technology of the present invention.

To further distinguish over the combination of Washizu and Clabburn, claim 6 recites separately molding modified PTFE powders having different particle sizes, claim 8 recites molding an as-polymerized modified PTFE and a granulated product of that modified PTFE, claim 9 calls for joining the premolded parts in the absence of an adhesive, and claims 10-11 require differently shaped premolded parts. It goes without saying that these optional features of the invention differentiate the present invention still further over the Washizu and Clabburn references.

Conclusion


This "Amendment under 37 CFR 1.116" constitutes a full and complete

response to the issues raised in the outstanding Office Action. Accordingly, the Examiner is respectfully requested to withdraw the rejections of record and to pass this application to Issue.

In the event there are any problems remaining in this application, the Examiner is invited to contact Mr. Richard J. Gallagher, Registration No. 28,781, at (703) 205-8008.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 CFR §§ 1.16 or 1.17, particularly extension of time fees.

Respectfully submitted,
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ADM:RG 

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